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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,372	02/06/2004	Tomohisa Kato	248601US3	6781

22850 7590 07/14/2005

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ALEXANDRIA, VA 22314

EXAMINER

ADDISU, SARA

ART UNIT	PAPER NUMBER
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3722

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/772,372

Applicant(s)

KATO ET AL.

Examiner

Sara Addisu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/6/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/10/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Reference "34c" in Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being obvious over Inada et al. (U.S. Pub. No. 2004/0134318), in view of Müller (U.S. Patent No. 4,833,764)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing

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that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Inada et al. teaches a machine tool having a turntable (20b) mounted to rotate around a first rotating axis (B), tool holder mounted to rotate around an axis that is perpendicular to B-axis and a workpiece rotating around C-axis (which is perpendicular to B-axis). Inada et al. also teaches tool (T) being set such that its machining (cutting) point (B), which is in line with its rotational axis, coincides the B-axis (see figures 2C & 4 and Page 4, paragraph 67, lines 1-6). Furthermore, Inada et al. teaches X-axis moving unit (60), Y-axis moving unit (30: which is parallel to the rotational B-axis), a Z-axis moving unit (50) and fine adjustment mechanism (12). Inada et al. also teaches the moving units, the drive unit and the turning units being controlled such that the work point on the workpiece coincides with the machining point of the tool (i.e. is moved along the machined surface). Additionally, Inada et al. teaches the X-axis moving unit (60) producing relative movement between the work point (A) of the workpiece and the machining point (B) of the tool (page 4, paragraph 56, lines 1-5). This means the X-axis movement is the feeding direction of the tool, therefore the front rake surface of the tool is perpendicular to its feeding direction while coinciding with the tool axis (see diagram below).

However, Inada et al. fails to teach a rotary base mounted on the rotary table (turntable) (20b) rotating around an axis that is perpendicular to both B-axis and tool rotating axis.

Muller teaches a machine tool having a U-axis (redefined as Z-axis) moving unit (longitudinal carriage: 18) disposed on an X-axis moving unit (12), which is disposed on the top surface of bed (8). Muller also teaches a rotatable tool table 50 rotating around axis (B1, B2, B3, B4) perpendicularly intersecting the vertical axis of rotation C of the revolving head (36), a Y-axis moving unit (guide: 30) disposed on the vertical side surface of bed (8) and drive for workpiece (46) rotating about axis F (See figure 1). Muller also teaches a drive for rotating workpiece (46) that is disposed on the U-axis (redefined as Z-axis) moving unit (longitudinal carriage: 18) and axis F coincides with the center axis extending along the z-axis/U axis). Additionally, Muller teaches table (34) with tool working units (54₁, 54₂, 54₃ and 54₄), disposed on the Y-axis moving unit and rotatably mounting revolving head (36) having a vertical axis of rotation C (equivalent to B-axis of instant invention) (Col. 5, lines 15-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Inada et al's invention such that a rotatable tool table 50 having axis of rotation (B1, B2, B3 or B4) is mounted on revolving head (36), as taught by Muller for the purpose of opening up possibility of machining workpieces of arbitrary shape (without remounting of workpieces) starting from a blank and ending with a finished product ('764, Col. 6, lines 12-19).

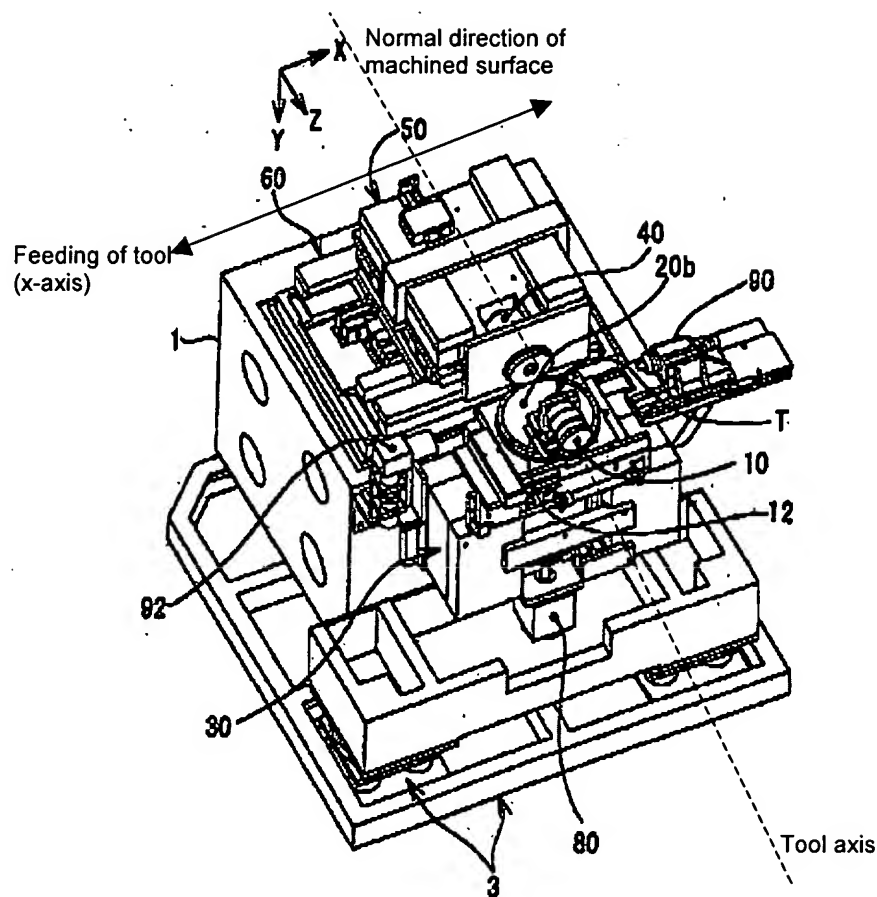


FIG. 4

Conclusion

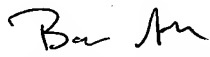
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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BOYER D. ASHLEY
PRIMARY EXAMINER